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ABSTRACT

This paper examines the process of intervention design as it relates to the grammar of artifactual action. In his discussion, the author identifies three separate elements of artifactual action. These elements include defining the situation of action and the change agent's relationship to the situation; generating typical expectations about objectives, motivations, and patterns of interaction within the defined situation; and observing the situation to collect data necessary to correct the typical expectations about the situation. Designing an intervention involves a combination of these three related processes. The author suggests that the essence of such an intervention strategy is to increase the power of the innovator system or to enable those in the adopter system to make more satisfying power transactions. Which form of power is applied in a particular change situation will be determined by the values of the change agent. (Author/JG)

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# THE GRAMMAR OF ARTIFACTUAL ACTION

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AUTHOR'S NOTE

This paper begins by defining artifactual action and discriminates between three levels of artifactual action as ideological invention, policy making, and intervention design. There are similarities between these three processes. This paper, however, deals only with the process of intervention design. It is suggested that a grammar of artifactual action is possible without first answering the question whether the design of instrumental artifactual action is an art, a science or even a separate professional discipline.

Three elements of the grammar of artifactual action have been separated: (1) structuring the situation of action, and the change maker's relationship with the structured situation (that is, defining the boundaries of the configuration of change relationship and the networks of process relationships within the configuration of change); (2) generating typical expectations about the social entities within the configuration: their objectives, motivations and patterns of mutual interactions (that is, generating generalizations about behaviors of actors involved, on the basis of experience or systematic social and behavioral science knowledge; and (3) experiencing and observing the situation to collect valid data in situ for applying existential corrections to the typical expectations about the situation.

Strategizing for instrumental artifactual action thus involves a dynamic combination of these three related processes. The essence of strategizing is to increase the power of the innovator system in relation to the adopter system if the adopter system is resistent to change, or to enable those in the adopter system to make more satisfying power transactions.[1] Power is seen as an attribute

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[1] For an elaboration of these ideas see a companion paper by H.S. Bhola, "Power: The Anchor of Stability, The Lever of Change (Notes Towards a General Theory of Being and Society)," available from the author. (Mimeo; July, 1975).

of the individual and may be experienced without having to be exercised on another individual or group. Power is shown to have various currencies, ranging from physical violence to affection. Which form of power is brought into play in a particular change situation is asserted to be a question of values of the change maker.

This is the skeleton of what we hope will become a larger monograph on the grammar of artifactual action. In later months we will have opportunities to examine further the usefulness of "grammar" as analogue. We would apply this grammar to artifactual action at the levels of ideological invention and policy making. Also we would seek to demonstrate the usefulness of this conceptualization in explaining and integrating the various research findings in the areas of innovation diffusion and planned change and reconcile divergent hypotheses and theoretical assertions.

August 5, 1975 H.S. Bhola

# THE GRAMMAR OF ARTIFACTUAL ACTION

H.S. Bhola

## Introductory

A study of the grammar of action must make assumptions about the meaning and the value of action in human life. Paulo Freire[1] puts it thus:

> Men as beings of the praxis, differ from animals, which are beings of pure activity. Animals do not consider the world; they are immersed in it. In contrast, men emerge from the world, objectify it, and in so doing can understand it and transform it.

Freire goes on to assert that praxis is the "ontological vocation" of man and for man not to engage in praxis, through a cycle of action and reflection, is to be less than human. Bhagavad-Gita, the most famous and popular of Hindu religious writings enjoins "the necessity of action for all men and even for God."[2] It tells the Karmayogi: "The performance of action without regard to its fruit is itself a mode of detachment."[3]

## Just Action and The Immorality of Inaction

Man's innermost life of thoughts and wishes has also been subjected to moral evaluation in many theological and philosophic systems. However, man's actions in regard to other men are of direct concern to a Karmayogi as well as to the ordinary change agent. What is moral or just action? Rawls sets

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[1] Paulo Freire, Pedagogy of the Oppressed. Translated by Myra Ramos. Seabury Press, 1971.

[2] Geoffrey Parrinder, A Dictionary of Non-Christian Religions. Philadelphia: The Westminster Press, 1971, Page 44.

[3] S.G.F. Brandon (Ed.) Dictionary of Comparative Religion. New York: Charles Scribner's Sons, 1970, Page 136.

forth two principles of social justice that should be found acceptable in a rational community of human beings interested in social action:

> First: each person is to have equal right to the most extensive basic liberty compatible with a similar liberty for others.
>
> Second: social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage, and (b) attached to positions and offices open to all.[1]

Rawls restates the second principle as follows:

> Social and economic inequalities are to be arranged so that they are both (a) to the greatest benefit of the least advantaged and (b) attached to offices and positions open to all under conditions of fair equality of opportunity.[2]

Rawl's definition of just action becomes explosive when the community of men being considered is not composed merely of those living within one nation state but of the total human race; and when the arrangements being discussed are, therefore, global arrangements. It would be a challenge for men and women all over the world to take such just and moral actions.

While all men can engage in action, all human beings are not fortunate or courageous enough to engage in significant action in the course of their lives. In some unjust and brutal social systems, just action on the part of an individual may result in the removal of that individual from the situation, by imprisonment or by death. In the circumstances, inaction may be forgivable under some conditions. However, inaction may be immoral when actions must be taken but are merely left for others to take, at the risk of their lives. Sometimes half-baked humanism or misguided conservatism may lead us to a

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[1]John Rawls, A Theory of Justice, Cambridge, Harvard University Press, 1971, Page 60.

[2]Ibid., Page 83.

position of letting people live their lives so that we do not destroy the integrity of their cultures.

Open-ended Collaborations

Freire, who has been quoted earlier, has suggested a pedagogy for helping the oppressed out of their dependencies, and their culture of silence. He suggests that those who go out to help the underprivileged should not substitute one oppressive reality with another oppressive reality. The oppressed must be helped to engage in dialogic action, enabled to look at the reality that surrounds them and change it themselves, in their own way, to create a new reality that is, again, their own. This is to be achieved through conscientization, a process of generating self-awareness.[1] Others have talked of mutuality between consultant and client and of authenticity on the part of the change agent;[2] yet others have proposed collaborative technical assistance to poor nations.[3] These good intentions, however, need to be put in a proper perspective. Immaculate conceptions are part of the theology and mythology both in the East and the West. But in the day-to-day world of actions, immaculate births of events of change have been unknown. It is seen that some are being oppressed. It is seen that their reality is oppressive. It is seen that the oppressed have not been able to help themselves, and that outside intervention is needed. To wit, an outsider has already defined the

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[1] Paulo Freire, Op. Cit.

[2] Chris Argyris, Intervention Theory and Method: A Behavioral Science View. New York: Addison-Wesley, 1970.

[3] See Dennis Goulet, Cruel Choice. New York: Atheneum, 1971. The discussion at the Indiana University Conference on Foundations of Institutional Design for Enlarging Public Policy Implementation Capabilities (April 11-12, 1975, Bloomington, Indiana) was full of these collaborative concerns in technical assistance nationally and internationally.

situation as oppressive and will assist so that this situation of oppression can be changed into a situation of nonoppression. Right there, the imposition of the definitions of the present and of the images of a desirable future has taken place. The situation also has already been diagnosed as needing outside help.

It is not being suggested that the outside change agent should carry with him ready-made solutions which he must impose on communities as good for them, and in their best interest. The change agent must be open-ended; he must be modest; he must learn from the realities surrounding him; and he must make the change experience a learning experience for those for whom the change is intended. As he goes through these processes, he must continuously apply existential corrections to his earlier vision. The vision must become shared, and in the process of sharing must become somewhat or even completely changed. However, there is no room for a change agent who had no ideology, no general sense of direction, no particular commitment but simply came to create conscientization.

Definition of Artifactual Action

Herbert Simon in his writings has characterized organizational design as the science of the artificial. As do Ostrom and Hennessey,[1] we prefer the term artifactual in describing purposive, organization and intervention behavior of man. Artifactual action as used in this paper is social action organized by a conception of means and ends relationships. (It does not cover the engineering of material artifacts.) We include in our conception

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[1]Vincent Ostrom and Timothy Hennessey, Institutional Analysis and Design. (Workshop in Political Theory and Policy Analysis) Department of Political Science, Indiana University, Bloomington, Ind. Page II-29.

of artifactual actions those actions which create social-symbolic artifacts--new social systems, cultural patterns, organizations and ideologies. Artifactual actions thus involve "culture-making through systematic interventions."

Levels of Artifactual Action

Artifactual actions may vary in scope from counseling a family through campaigning in the neighborhood for a State Senator, reorganizing an office, doing institution building, working for family planning in a country, designing new economic policies for a region, carrying out guerrilla warfare, to purifying Marxism-Leninism. Each of these artifactual actions provides the actor with a certain configuration in which to experience or exercise power, a stage with a particular size to play out his inner conflicts on the social stage.[1] Some individuals are born with needs to experience power that are truly great, some others are born with much lesser needs to experience power. Elsewhere,[2] we have classified individuals in terms of their needs to experience power into three categories: the absolute elite, the authorized elite, and the instrumental elite. Corresponding to these three categories of the elite in a society, three levels of artifactual action can be suggested as:

1. Ideological Invention
2. Policy Making, and
3. Intervention design

The relationship between elite categories, action orientations of the elite in each category and institutional scope of elite actions can be elaborated as follows:[3]

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[1]Erik Erikson, Childhood and Society. New York: Norton, 1963.

[2]H.S. Bhola, "Notes Toward a Theory: Cultural Action as Elite Initiatives in Affiliation/Exclusion," Viewpoints, Vol. 48, No. 3, May 1972, Pages 1-37.

[3]Adapted from H.S. Bhola, "The Design of (Educational) Policy: Directing

| Elite Category | Orientation to Artifactual Actions | Institutional Scope |
|---|---|---|
| The Absolute Elite | Ideological Invention | Synoptic: All institutions in the society |
| The Authorized Elite | Policy Making | Segmental: Multiple institutions in a sector of the society |
| The Instrumental Elite | Intervention Design | Specific: One particular institution in the total institutional network |

It will be somewhat presumptuous for this author to write to school the absolute elite--the Lenins, the Ghandis, the Maos and the Castros. They are self-schooled, and they can teach us much through their words and actions. It will be equally presumptuous for the author to offer through this paper a seminar to the authorized elite. However, it is possible to address groups of the instrumental elite, whose numbers are legion and who literally run the lives of people in all societies all over the world, on the subject of the grammar of artifactual action. In this paper, we will be focusing on the design of interventions for innovation diffusion and planned change. This will still cover a large area of artifactual actions: teaching, consulting, advising, advocating, marketing, evangelizing, innovating, campaigning, group counseling, family planning, agricultural extension, health education, curriculum design, organizational design, planning, institution

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and Harnessing Social Power for Social Outcomes," Viewpoints, Vol. 51, No. 3, May 1975, Page 11.

building, technical assistance, technology transfer, development and modernization.

Art or Science

Is intervention design an art? Can it be a science? Is it even a separate discipline? To propose a grammar of artifactual action, these questions do not have to be answered, first. Art after all does have form. We do talk of a grammar of the film. Interdisciplinary sciences are not only possible but also have proven to be robust; and have solved problems which sciences based on pure disciplines were unable to tackle.

Our assumptions are as follows. Intervention design is not a pure discipline; it is an area of interest. It is interdisciplinary. It draws from all the social and the behavioral sciences. Further, one can go scientifically about the problems of intervention design. Intervention design has to do with individuals, groups, institutions, and communities living their normal lives, out in the open world. Intervention designers have to know and understand the peoples, groups and systems they seek to change. This involves understandings, perceptions, and sensitivities; and some intuitions that are not the same as reasoned anticipations. It might be useful, therefore, to speak of "the art of the science of intervention design."

Grammar as Analogue

We use the word grammar here in its conventional meanings of the structure of the elements of an art or science; an elaboration of "the basic elements or principles of a science, art, discipline, practice."[1] The use

[1] Webster's Third New International Dictionary, 1961.

of grammar as an analogue, however, might help us develop concepts equivalent to morphology, syntax, and semantics, and help retroduce from the study of structure of languages and dialects to the study of the structures of prescriptive statements developed to guide intervention design.

Three Elements of Artifactual Action

Three elements are involved in artifactual actions of our interest:

(1) Ordering/Relati ;

(2) Expecting/Typifying

(3) Experiencing/Correcting

These may be seen interacting as follows:

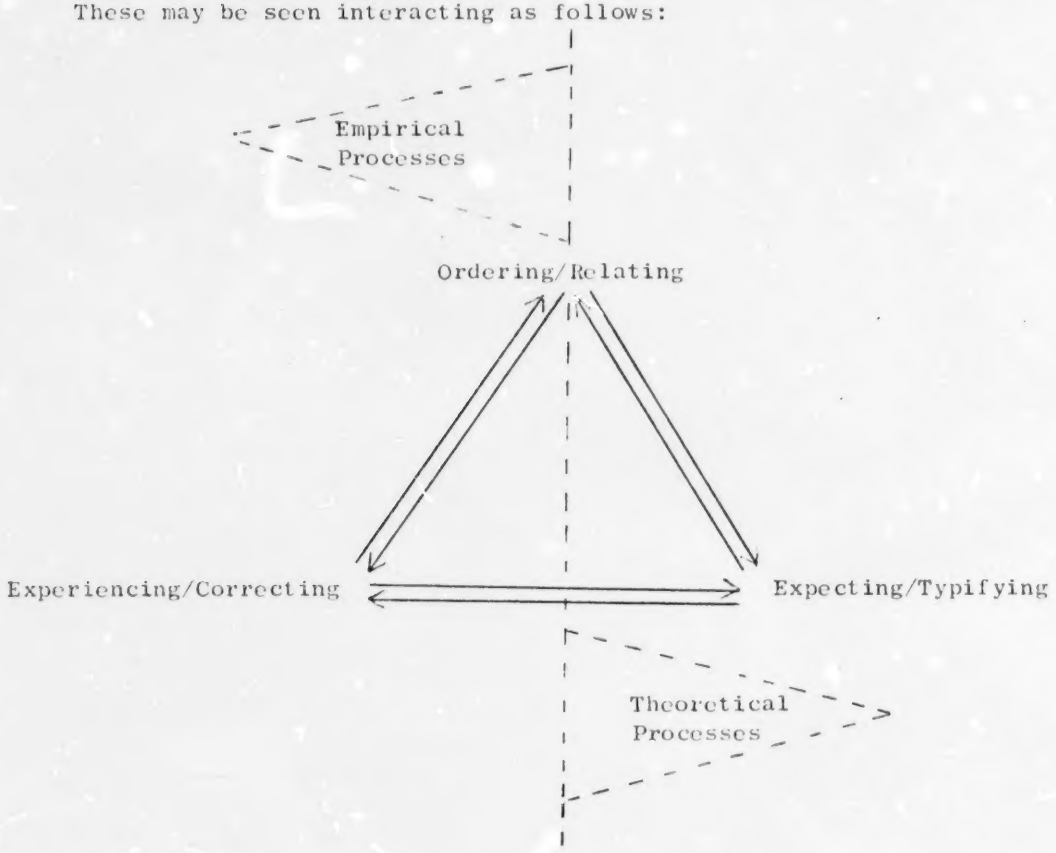


Figure-1. Three elements of the grammar of artifactual action, their nature and interrelations.

Ordering/Relating

The reality surrounding the change agent must be ordered in some way for the change agent to be able to do anything with it. A perceptual net must be thrown on the buzzing, booming confusion that the phenomenological world presents and some elements and configurations of that reality must be "caught in the net." To understand is to structure; to structure is to include some, to exclude much else, to draw boundaries, and to reveal bonds between entities included within the circle of concern.

There may be two types of ordering: (1) Structural ordering and (2) Time ordering. Structural ordering involves the symbolic reconstruction of a chosen piece of reality in all its multiple dimensions, separating the various overlapping and intersecting subsystems that are part of this reality. Time ordering puts structural relationships on the rails and makes them dynamic. It brings a sense of history to the relationships and continuity to processes under study. It separates antecedents from what follows, helps divide processes into cycles and phases.

The ordering/relating process must also order the change maker into the configuration of change. He must structure himself into the structure of ordered relationships. That is, the change maker must clarify his own relationship with his client system.

Expecting/Typifying

Once the reality surrounding the change agent has been ordered, as well as the change agent's relationships with this ordered reality, the change agent must develop a set of expectations about the social entities, and the processes that are part of this reality. The world of artifactual action will be peopled with individuals who are organized into various groups and

institutions; who are parts of particular occupational, religious, ethnic, and economic class subcultures; and who are members of particular nation states and cultures. The change maker must have knowledge of the typical behavior of individuals, groups, organizations and cultures to be able to develop some expectations about behavioral acts and episodes that would most likely occur in the change situation of his concern. He must also have developed typical expectations about teaching-learning, organizational and distributive processes that may be part of his ordered reality. An advisor from an American university hoping to work in the Indian planning commission, for example, should be able to generate some typical expectations about the situation based on his knowledge of India as a culture. His knowledge about the planning process, and of beaurocratic behavior should help him develop further expectations about what he will find in the planning commission in New Delhi. His understanding of individual motivations should prepare him somewhat for work with his Indian colleagues.

These typical expectations must be built on the basis of collective human wisdom. Sometimes this collective wisdom may be available only as anecdotes and stories. Ideally, it should be available in the form of systematized and tested social and behavioral science knowledge. We will see what social and behavioral sciences have to tell us in this regard.

Experiencing/Correcting

Developing a set of typical expectations about the change situation is an important part of the task of the change agent but the process provides only blueprints and stereotypes which must be tested, revised, expanded, or altogether discarded. The change situation must be experienced by the change agent existentially, and corrections applied to his initial blueprints for

change. Out there in the actual world of change, people are real with real names--Paul, Ali, Maria and Shanti. They are caste, class, and sex types, but they are also individuals with histories of socialization that are uniquely their own. They belong to groups and those groups are typical in some ways, but those groups are also situation-specific with their own genesis, purposes and climates. They are working within organizations, and organizational behavior, in some ways, is typical across organizations and even across cultures, but these organizations now have particular names, street addresses and existential realities. Again, while typical statements could be made about cultures, a change agent would come in touch with a particular segment of a culture. Modal cultural types will get confounded. There would be reformed Jews, Westernized Brahmins, Sanskritized non-Brahmins, and Pathans that are pacifists. The grammar of artifactual action prescribes that existential corrections be applied to both of the other two elements of the grammar--to structural and time orderings, and to sets of typical expectations.

On the basis of the preceding discussion, we can now present a model of the grammar of artifactual action, as shown on the following page.

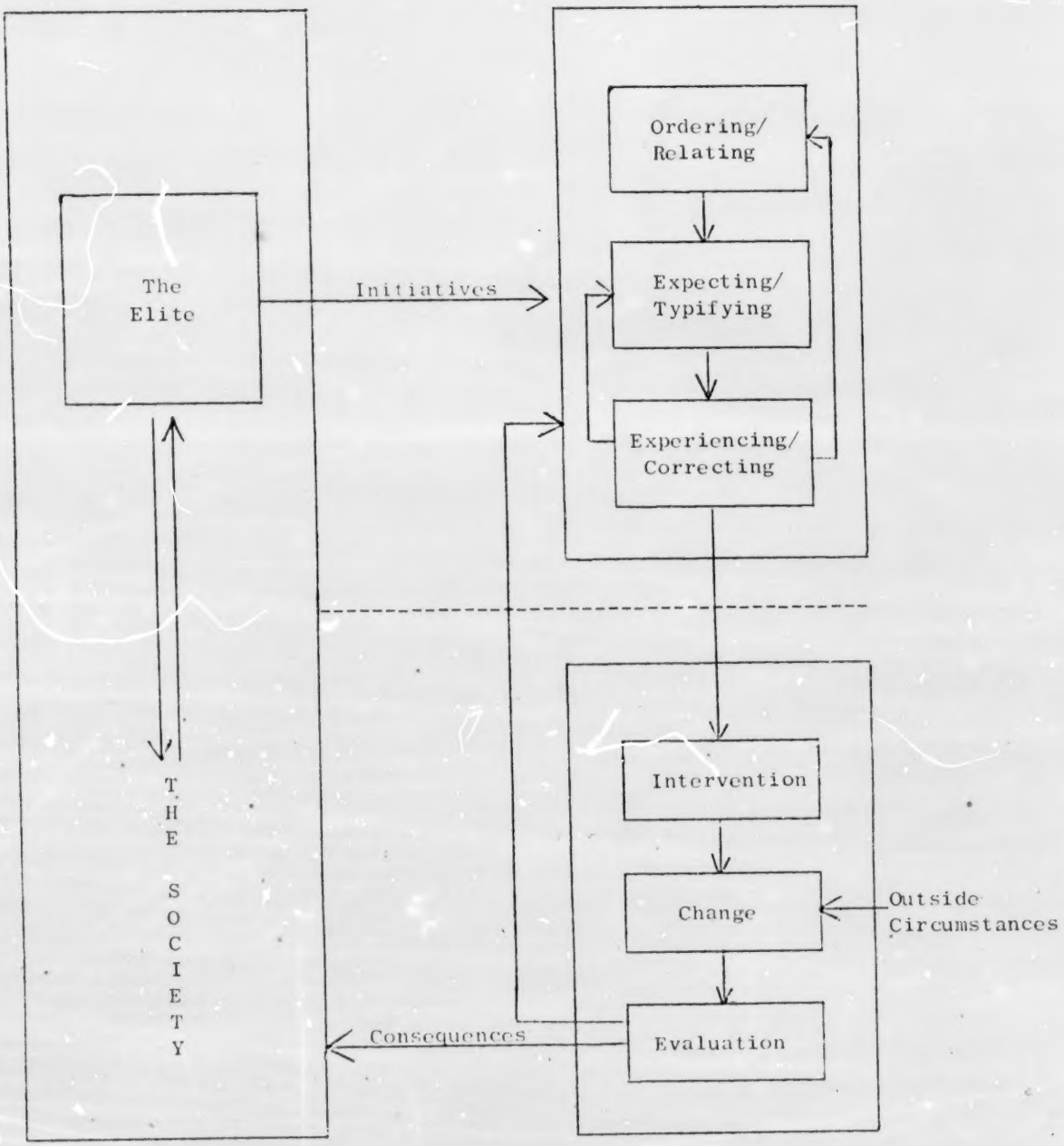


Figure-2. A model of the grammar of artifactual action

The model suggests that the elite in a society take the initiatives for making interventions within a society.[1] Their experiments in intervention design go through the processes of ordering, typifying and correcting until particular interventions are defined. Change often follows interventions (at least, in time) but it need not have been caused by the intervention alone or may not have been caused by the intervention at all. It may have resulted from circumstances outside the system of intervention(s). An evaluation of the change effort would show some consequences of the intervention which the elite would then take into account to begin a new cycle of initiatives for change in a society.

It should be indicated that self-conscious use of theory and research in ordering, typifying and experiencing would not ensure appropriate intervention, and consequently, effective intervention and desired impact. The processes involved are highly complex. The realities may be badly ordered by a change agent. That is, his choice of the organizing model or theory may be unfortunate. The structuring provided by the model may be too general and simplified or it may be too narrow and segmental. Consequently, the model of reality that is developed may be flat and shorn of significant dimensions; and may miss the dynamics of a multiplicity of overlapping and intersecting systems. Value positions and particular propensities of individual change agents may blind them to some important structures and processes.

The change agent may have insufficient knowledge of theory and research in social and behavioral sciences and may not be able to apply what he does know in developing typical expectations about the social entities and processes

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[1] Bhola, "Notes Toward a Theory: Cultural Action as Elite Initiatives in Affiliation/Exclusion," Op. Cit.

of his concern. On the other hand, he may be so caught up with the typical that he may fail to come to terms with the existential realities. He may see a giraffe and say, "There ain't no such thing!"

Experiencing realities to apply existential corrections to stereotypes, typical expectations and blueprints, again, offers problems. On the one hand, the change agent needs to be perceptive--something that cannot always be taken for granted. On the other hand, the change agent cannot always study his world as systematically as he might wish to study. Not only are there pressures of time on the change agent, but also individuals and groups resent being studied, and institutions don't want anyone to be snooping on them and taking notes.

## Choice of the Ordering Device

The Homo sapiens are also Homo theorans.[1] Men define their personal identities, the world around them, and their relationships with this world through and in theorizing. They live and grow and die by theories. The change agent qua change agent must take his theories seriously. He must select appropriate models of change that, singly or in combination, would help him order the world of change in such a way that actual realities can be contained within his definition of the configuration, and appropriate change strategies can be designed.

A whole range of models of social change are available in social science literature. These vary in their interests from historical and political change to individual change through clinical approaches. Each model offers its own

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[1] See H.S. Bhola, "Acquiring, Storing, and Transferring Human Experience: Story to Theory Continuum," a paper available from the author. (Mimeo; July, 1975).

prescription for ordering reality. Some of these models are inadequate, others unusable. Some of these are too general. Some others are models with narrow foci. They do not see enough of the real configuration of change and they do not see anything of the world immediately surrounding the change configuration.

We suggest that the Configurational Theory of Innovation Diffusion (or the CLER model)[1] can be an appropriate model for ordering the reality of a change situation. A complete elaboration of the model cannot be included here. The essential concepts of the model must, however, be stated. The CLER model suggests simply that the probability of a planned change event occurring depends on developing an optimal mix of four variables--configurational relationships between the innovator and the adopter systems (C); linkages within and between these systems (L); the environment (E) surrounding the change transaction; and the resources (R) available to the innovator system to promote the change and the adopter system to adopt it.

Configurational relationships (C) as conceived in the CLER model are a useful concept for ordering the world of change. Configurational relationships are taxonomized as follows:

| | | Innovators | | | |
|---|---|---|---|---|---|
| | | Individual (I) | Group (G) | Institution (IS) | Culture (CL) |
| Adopters | I | I-I | I-G | I-IS | I-CL |
| | G | G-I | G-G | G-IS | G-CL |
| | IS | IS-I | IS-G | IS-IS | IS-CL |
| | CL | CL-I | CL-G | CL-IS | CL-CL |

[1] H.S. Bhola, "The Configurational Theory of Innovation Diffusion," Indian Educational Review, Vol. 2, No. 1 (January 1967), Pages 42-72;

Change is seen to be occurring in overlapping and intersecting configurational relationships at the same one time. Through configuration mapping any change situation, of whatever complexity, can be structured in preparation for intervention. The delineation of Linkages within and between configurations articulates the dynamics of possible actions within the network of configurational relationships. The Environment variable draws attention to circumstances outside the boundaries of the change transaction, for sometimes outside events may be in the saddle and not the change agent. Finally, the variable of Resources enables the change agent not merely to organize for change but also to feed the fires of change.

The following characteristics of the CLER model as an ordering device should be stated:

1. The CLER model is an intermediate level model. It is neither too broad and general nor too narrow and specific.

2. It is a comprehensive model. It presents a taxonomy of change situations which would cover all types of change events from hypnosis through organizational development, institution building to national chrisma.

3. The CLER model is a useful tool for handling structural ordering as well as time ordering of reality. Through the concept of configuration mapping the reality of the world of change can be modeled to include all appropriate overlapping and intersecting social systems to reflect the true complexity of the phenomena of change.

4. Time ordering of the change phenomena into possible historical and future phases and cycles can be realized through configuration mapping (and by

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(ERIC ED. 011. 147). An updated version of the theory will be found in "Configurations of Change: An Engineering Theory of Innovation Diffusion, Planned Change and Development," available from the author. (Mimeo; 1972).

developing comprehensive CLER-profiles) at various points in time--$t_{-n}$, $t_{-(n-1)}$ . . . $t_{-3}$, $t_{-2}$, $t_{-1}$, $t_0$, $t_1$, $t_2$, $t_3$ . . . $t_{n-1}$, $t_n$.

5. The configurational maps thus developed would allow the change agent to deal with change at psychological, institutional and socio-cultural levels at the same time. Individual transactions could be analyzed within the settings of overall institutional transactions, which, in turn, could be illumined by the cultural and intercultural realities surrounding them. This would enable the change agent to move across levels, and concurrently apply psychological and sociological approaches. No dichotomous choices between the two levels of analyses would be forced from the beginning.

6. The concepts of second-order and third-order configurational relationships, also part of the CLER model, enable the change agent to go from mere constructs to his constituents in flesh and blood. The configurational mapping can be successively reviewed to move from social-scientific constructs of cultures, communities, institutions and individuals to real people working within specific institutions in a particular socio-cultural setting. The CLER model thus accommodates the possibility of existential corrections to be applied to the theoretically-ordered design of the change situation.

7. The CLER model not only orders the reality of the change situation in terms of various overlapping and intersecting configurational relationships, but it also orders the innovator system into the structure of these relationships.

All models have their special paradigmatic contexts. They are anchored in particular world views. They reflect particular sets of assumptions, and project particular value positions. Planned change, by definition, is not spontaneous. Communities may be ready, there may be discontent at the grass roots, but an "outsider" has to help for the change to come about. This model

does make assumptions about the significant role of the elite in terms of the initiatives they take to bring about change within institutions and societies. This is an important value orientation of the model. But at another level, the CLER model does not take any value position. That is at the level of the choice of means to bring about change. The change maker is simply asked to optimize C, L, E and R. He may use approaches both open and secretive, educational and manipulative, coercive and persuasive.

## Developing Typical Expectations

Once the world of change and the change agent's own relationship with the change situation have been initially ordered, the process of developing typical expectations about the change situation must be undertaken. Expectations about the typical behavior of individuals, groups, institutional units, communities and subcultures in the configurational map must be developed; as also the typical expectations about the processes already taking place or to be generated within the change configuration.

Men learn from experience. They transfer their knowledge to new situations. Knowledge is transferred both intragenerationally and intergenerationally for collective wisdom to emerge. This has been an important mechanism for the survival of the human race. Human beings have used different devices for collecting, refining, storing and communicating human experience for collective use. The pre-literate man used story, metaphor, riddle and parable to do this. The literate man hypothesizes and engages in formal theory construction.[1] He tests his hypotheses and his theories. He not only accumulates and organizes experiential knowledge, he creates new knowledge. This knowledge is found

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[1] H.S. Bhola, "Acquiring, Storing, and Transferring Human Experience: Story to Theory Continuum," Op. Cit.

systematized in the social and behavioral sciences such as anthropology, sociology, psychology, political science, economics, etc. Change agents must go to the social and behavioral sciences and apply social and behavioral science theory and research to their problem.

Applying social science research and theory for generating typical expectations about social entities and processes is, however, a complex task. First, it requires defining the real-life situation in particular social and behavioral science terms. The reality must not merely be ordered, it must be ordered social-scientifically. Second, suitable generalizations must be discovered in the social and behavioral science research that seem clearly to illuminate the situation. Third, these generalizations must be made meaningful by putting back into them the concrete details from the real-life change situation. Statements such as the following should result:

--The individual farmers in the Project area, being landless farmers, would show little interest in the techniques of improved production unless their share of the produce is proportionately increased, or unless their labors in the field can be significantly reduced, or made much less brutalizing.

--In the Project community, since acute economic deprivation prevails, literacy teaching, for likely success, should be rooted in the economic rewards that will accrue from the total program.

--The institution collaborating in the change effort, since it is under attack from the outside and is being forced to manage with smaller and smaller budgets every year, will most likely be open to trying innovations that might strengthen its position.

--Since the recipient of technical assistance is a country with an economy

of scarcity, there would be acute competition among candidates for selection for training abroad under the Project sponsorship; and people with powerful political connections, but not necessarily the most suitable, will be sent out abroad for training.

There are problems involved in the process of this application. These problems may be characterized as follows:

1. The discipline-oriented organization of theory and research of social and behavioral sciences creates difficulties about storage and retrieval. Real-life problems are amenable most often to interdisciplinary solutions. They are not purely sociological or purely psychological or purely economical problems. They require interdisciplinary theory and research. We have not yet learnt how to organize interdisciplinary research and theory and where to look for it in literature and in libraries.

2. Generalizations relevant to the change situation, when discovered, are often too general. As Whitehead once said, a generalization is useful to the extent to which concrete details can be put back into it. It is not always easy for a change agent to put concrete details back into the generalization.

3. Again, while there is a lot of theory and research available in social and behavioral sciences that explains individual, group and organizational behavior, there is not as much available in terms of a technology of making change. Research has not gone through the process of development to be put to work in making change interventions.

4. Finally, change occurs within many different configurational relationships. The CLER model, presented earlier, suggests sixteen different configurational relationships involving innovator and adopter systems. Each configurational relationship presents a particular category of psycho-social

reality; demands a particular level of response from the change agent; and requires particular kinds of levers for generating planned change actions. Literature of social and behavioral sciences, of interest to students of change, is not organized for easy retrieval to relate directly to different configurational relationships and different factors that might be determinants of change within those configurational relationships.[1]

Thus, there are problems involved in applying social and behavioral science research to the ordered realities of the world of change for developing typical expectations about those realities. The task, however, must be performed, either intuitively or self-consciously and systematically. Change agents should feel obligated to use systematic approaches in developing these sets of typical expectations. Science must take over from pure intuition.

## Making Existential Corrections

The knowledge of social and behavioral sciences will give us some hunches and some hypotheses about the change situation but not the truth about the living system that will actually confront us. It will tell us what we should expect to find but not exactly what we will find. Existential corrections will have to be applied to the set of conceptually-generated expectations. For instance, we will have certain expectations about individual behavior but in the real change situation we may find both exceptional men and psychotics. We

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[1] A project is now under way that will organize a review of theory, research, and technology of innovation diffusion, planned change and development according to the conceptual structure of the CLER model. This arrangement would enable researchers and practitioners dealing with a specific configuration of change to go directly to a body of literature most related to their interest, for designing social interventions, for advocacy of causes and for planning of change. See H.S. Bhola, "Configurations of Change: The Framework for a Research Review," available from the author. (Mimeo; 1975).

will have certain expectations about group and institutional behavior but in real life we may find groups that are atypical and institutional arrangements that are unique. We will have expectations about the culture in which we will work but we may find ourselves working in an unrepresentative subculture of insecure or xenophobic elite. In such situations, the initial set of expectations will have to be revised or completely set aside.

What are the requirements for one to be able to apply these existential corrections? These requirements, we think, fall into two categories: (1) sensitivity and (2) science. On the one hand, a change agent needs to be sensitive and perceptive so that the subtleties of human interactions surrounding him would register on his mind; and on the other hand, he has to be scientific to be able to use objective methods of creating valid data *in situ* for reality-testing and for feedback.

On Being Perceptive

Inevitably, we have to deal with the change maker himself as a person. Images of the future are carried in his head. He is perceiving the realities that surround him. The facts of the present are being processed under his skull as he intuites, deduces, analogizes, hypothesizes, predicts, tests, and revises descriptions and expectations. He is the instrument on which all music is made. His sensitivities, his perceptions, his discernments are crucial.

We know, however, that individuals are different. Therefore, it is reasonable to expect that individuals in change making roles also differ from each other considerably, in their being perceptive. Some will attend an organizational meeting and would read the story of conflict and tension in the organization as if it was written on the wall. Others would notice nothing and would be deceived by correct and polite behavior of the participants.

Some would register minute changes in the emotive climate of a group that others would completely fail to see.

How does one become perceptive or more perceptive than he is initially? In the literature of organization development[1] and TM (Transcendental Meditation)[2] there is much discussion on learning to get in touch with oneself, on perceiving the impact of one's own behavior on others, and on learning to read individual states and group climates. We refer our readers to that body of literature on raising consciousness and self-awareness through which awareness of the other must arise as well.

On Being Scientific

The change agent also must develop an experimental stance toward the change situation. For one, it would mean that the change agent enters the change situation with hypotheses but not decisions. The change agent should not seek quick closures; and should avoid getting locked into particular positions by making loud statements of intent regarding goals, plans, and strategies. Finally, valid data must be collected in situ to objectify impressions and random observations, to test hypotheses, and to challenge positions. Where data cannot be collected, the change agent must consult with others around him to challenge individual perceptions and to test reality.

## Strategizing for Action

The change configuration, the world surrounding the change configuration, and the relationship of the change agent with this change configuration have

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[1]For just one such reference see Richard A. Schmuck and Matthew B. Miles, Organization Development in Schools, Palo Alto, Calif.: National Press Books, 1971.

[2]See Maharishi Mahesh Yogi, The Science of Being and the Art of Living, London: International SRM Publications, 1966; also Anthony Campbell, Seven States of Consciousness. New York: Harper and Row (Perennial Paperback, P289) 197[illegible].

been ordered. Utilizing knowledge from social and behavioral sciences, a set of expectations of the typical has been generated. Existential corrections have been applied to this set of expectations. But what does one do, then, to move a present situation (P) to a future situation (F)? Does one bitch, shout, twist, yell, whisper, pat, praise, bribe, teach or persuade?

It is conceivable that in a long-term planned change episode one would be doing all of these at different times, with different people. But all this to what effect? What are we really doing when intervening to influence? What is the moving force for individual actions? What is the ghost in the social machine?

## Using Power in Changing Power Fields

Strategizing for social change means using social power (through various symbolic tools and tactics) so as to change a present network of power relationships into an alternative network of power relationships. To understand this statement, one needs an explanation of the concept of power and of its role in the dynamics of planned change.

Elsewhere,[1] we have defined power as a universal and primary individual attribute and asserted that to be, is to be powerful. We further assert that all human transactions are power transactions. Since groups, institutions, and societies can be seen as systems of human interactions, all social organization can be defined in terms of power. Thus groups are power fields; institutions are power fields with formalized and articulated structures; and society is a power field "resulting from many power fields, informal and formalized,

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[1]Bhola, "The Design of (Educational) Policy," Op. Cit.; Also Bhola, "Power: The Anchor of Stability, The Lever of Change," Op. Cit.

temporary and semi-permanent, coterminous with, built in, and built around each other, overlapping and intersecting at multiple planes."[1]

The primary human motivation is to experience power, but not always through exercising it on other human beings. Individual human beings define their identities through experiencing power, on certain scales, and through certain modes. Society develops structures and modes that accomodate or contain individual power needs, distribute power by ascribing it to some positions in the society and not to others, establish preferred modes of experiencing and exercising power, and create powerful agents that will ensure that power transactions are made according to rules. Significantly, power within a social system must always be unevenly distributed for any societal work to get done. Such a view of power can thus lead to a sociophysics which at the individual level can explain leadership, altruism, affection, guilt and deviancy; and at the societal level can explain the dynamics of competition and cooperation, stagnation and reform.

We can explain these apparently contradictory phenomena in terms of power transactions because power comes in many shapes and forms. It may be material power or symbolic power; it may be personal power or power ascribed to a position. Ever since man became a symbol user, power has been symbolically confounded and individuals can experience power within symbolically created systems of "reality." That is, that many in the same dance may indeed be dancing to different drummers! An individual may decide not to experience power within one symbolic system since he is experiencing greater power in another symbolic system and is thrilled with the experience.

To change an existing power field to a new one will mean a perturbation

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[1] Ibid.

in the present field, articulation of a new power field and its refreezing. In so doing, the power of some individuals may have to be neutralized; the power of some others may have to be increased; it may involve both conflict and coalitions. To strategize is to manipulate power, both for cooperation and conflict, to ensure that societal tasks will get done.

## Concluding Remarks

The preceding has been an attempt at theoretical speculation. It is not a theory that came off full-blown. Some of the ideas integrated here have been developed over the years. Some of the elements of the grammar presented above have already been put to use and found not wanting in solution-invention Yet these and other ideas presented above must be tested further. Available hypotheses and findings in the literature of change must be re-examined in terms of this sociophysics. These challenges must be met by students of change together as a professional community.